In the claims

1. (Currently Amended) A method of maintaining activity in a router to keep the router from entering a lock-up state, comprising the steps of:

(a) automatically sending, from a user computer, via the router, a request toward a backbone of a network to which a response is expected;

(b) determining, in the user computer, whether the response has been received;

(c) if no response has been received, displaying a notification message on the user computer indicating that network access to the network is unavailable; and

(d) periodically repeating at least steps (a) and (b).

2. (Original) The method of claim 1, wherein the request comprises a ping command.

3. (Previously Presented) The method of claim 2, wherein an Internet Protocol (IP) address is used as a destination address for the ping command.

4. (Previously Presented) The method of claim 1, wherein the request comprises one of a primary Internet Protocol (IP) address and a secondary IP address that ace is used in conjunction with a ping command.

5. (Original) The method of claim 1, wherein the step of displaying a notification message comprises a pop-up window.

6. (Original) The method of claim 1, wherein the method is implemented with one of computer software, firmware, or a combination thereof

7. (Original) The method of claim 6, wherein the software is downloaded from the Internet.

8. (Previously Presented) The method of claim 1, further comprising the step of determining if on an immediately preceding iteration no response was received and, if so, displaying a notification message indicating that network access has been restored.

9. (Original) The method of claim 1, wherein the network is the Internet.

10. (Currently Amended) In a network having a plurality of user computers in communication with a router, the router being in communication with a Digital Subscriber Line (DSL), the DSL carrying data to and from at least one of the plurality of user computers over the Internet and carrying voice signals to and from a telephone, a method of keeping the router in an operable state, comprising the steps of

(a) periodically sending from at least one of the user computers towards a DSL Access Multiplexer (DSLAM) a request to which a response is expected, the request being sent through the router that is located in a path of communication between the at least one of the user computers and the DSLAM ;

(b) determining if the response is received;

(c) displaying a first notification message on the at least one user computer when no response is received; and

(d) displaying a second notification message on the at least one user computer when the response is received.

11. (Original) The method of claim 10, wherein the request is sent every 5-10 minutes.

12. (Original) The method of claim 10, wherein the request comprises a ping command.

13. (Previously Presented) The method of claim 12, wherein an Internet Protocol (IP) address is used as a destination address for the ping command.

14. (Previously Presented) The method of claim 10, wherein the request comprises one of a primary Internet Protocol (IP) address and a secondary IP address that ate used in conjunction with a ping command.

15. (Original) The method of claim 10, wherein the step of displaying a notification message comprises a pop-up window.

16. (Original) The method of claim 10, wherein the method is implemented with one of computer software, firmware, or a combination thereof.

17. (Original) The method of claim 16, wherein the computer software is operable within a multi-tasking computer operating system.

18. (Original) The method of claim 16, wherein the computer software, firmware or combination thereof is automatically launched when the computer is booted.

19. (Original) The method of claim 16, wherein the software is downloaded from the Internet.

20. (Currently Amended) A method of notifying an end user of the status of his Internet access, comprising the steps of:

(a) automatically pinging an Internet Protocol (IP) address from a computer belonging to the end user and connected to a local area network which is in turn connected to a router;

(b) determining if a response to the pinging is received; and

(c) displaying a first message indicating that the user's Internet access is unavailable if no response is received, and displaying a second message indicating that the user's Internet access is restored when a response is received, after not receiving a response to a previous pinging.

21. (Original) The method of claim 20, wherein steps (a)-(c) are automatically repeated.

22. (Original) The method of claim 21, wherein repeated pinging keeps the router from entering a lock-up state.

23. (Original) The method of claim 20, wherein the method is implemented in one of software, firmware, or a combination thereof.

24. (Original) The method of claim 23, wherein the software is downloaded from the Internet.

25. (Original) The method of claim 23, wherein the computer software, firmware or a combination thereof is automatically launched when the computer is booted.

26. (Original) The method of claim 20, wherein the computer software is operable within a multi-tasking computer operating system.

27. (Currently Amended) In a network having a plurality of end user computers in communication with a router, the router being in communication with a Digital Subscriber Line (DSL), the DSL carrying data to and from at least one of the plurality of end user computers over the Internet and carrying voice signals to and from a telephone, a system for keeping the router in an operable state, comprising:

(a) means for periodically sending from at least one of the end user computers towards a DSL Access Multiplexer (DSLAM) a request to which a response is expected, the request being sent through the router that is located in a path of communication between the at least one of the user computers and the DSLAM;

(b) means for determining if the response is received;

(c) means for displaying a first notification message on the at least one end user computer when no response is received; and

(d) means for displaying a second notification message on the at least one end user computer when the response is received.

28. (Original) The system of claim 27, wherein the request is sent every 5-10 minutes.

29. (Original) The system of claim 27, wherein the request comprises a ping command.

30. (Previously Presented) The system of claim 29, wherein an Internet Protocol (IP) address is used as a destination address for the ping command.

31. (Previously Presented) The system of claim 27, wherein the request comprises one of a primary Internet Protocol (IP) address and a secondary IP address that ate used in conjunction with a ping command.

32. (Original) The system of claim 27, wherein the notification message is in the form of a pop-up window.

33. (Original) The system of claim 27, wherein the means for elements (a)-(d) comprises one of computer software, firmware, or a combination thereof

34. (Original) The system of claim 33, wherein the computer software, firmware or the combination thereof is operable within a multi-tasking computer operating system.

35. (Original) The system of claim 33, wherein the computer software, firmware or combination thereof is automatically launched when the computer is booted.